What is claimed is:

1. A brazed ceramic ring sandwich for a lithium ion battery comprising a first ring of ceramic material; a second ring of titanium; a third ring of a titanium alloy of aluminum and vanadium, Ti-6Al-4V; a gold alloy braze with a gold content by weight of more than 50%; wherein said gold alloy braze attaches said second ring of titanium to said first ceramic material; wherein said gold alloy attaches said third ring of titanium alloy to the other edge of the ceramic ring.

2. The brazed ceramic ring sandwich of claim 1 wherein the ceramic material is selected from the group consisting of aluminum oxide, zirconium oxide and zirconium oxide with 3% yttrium.

3. The brazed ceramic ring sandwich of claim 1 wherein the gold alloy braze is 96.4% gold, 3.0% nickel and 0.6% titanium.

4. The brazed ceramic ring sandwich of claim 1 wherein the ceramic ring is least 10 μm in height

5. The brazed ceramic ring sandwich of claim 1 wherein the height of the titanium ring must be at least 30 μm; and wherein the height of the titanium alloy, Ti-6Al-4V, ring must be at least 30 μm.

6. A method for constructing the ceramic ring sandwich comprising the steps of brazing together a sheet of a ceramic material with a titanium sheet, on one side, and a titanium alloy, Ti-6Al-4V, sheet on the side; cutting the sandwich to a desired shape with a laser.

7. The method of claim 6 comprising the step of selecting ceramic material from the group consisting of aluminum oxide, zirconium oxide and zirconium oxide with 3% yttrium.

8. The method of claim 6 comprising the step of utilizing a gold alloy braze consisting mainly of 96.4% gold, 3.0% nickel and 0.6% titanium.

9. The method of claim 6 comprising the step of selecting the height of the ceramic ring to be at least 10 μm.

10. The method of claim 6 comprising the steps of selecting the height of the titanium ring to be at least 30 μm; and selecting the height of the titanium alloy, Ti-6Al-4V, ring to be at least 30 μm.

11. A method for constructing a battery case comprising the steps of forming a cylinder of titanium alloy, Ti-6-Al-4V; forming an end-cap of titanium alloy, Ti-6-Al-4V, forming a ceramic ring sandwich of a ring of ceramic, a ring of titanium and a ring of a titanium alloy, Ti-6Al-4V, brazing said ceramic ring together with said titanium and titanium alloy rings wherein the ceramic ring is in the middle; forming a titanium end-cap with a feedthrough hole; welding the titanium alloy ring of the ceramic ring sandwich to the titanium alloy cylinder by laser welding; welding the titanium end-cap to the titanium ring of the ceramic ring sandwich by laser welding; and welding the titanium alloy end-cap to the titanium alloy cylinder.

12. The method of claim 11 comprising the step of selecting ceramic material from the group consisting of aluminum oxide, zirconium oxide and zirconium oxide with 3% yttrium.

13. The method of claim 11 comprising the step of utilizing a gold alloy braze consisting mainly of 96.4% gold, 3.0% nickel and 0.6% titanium.

14. The method of claim 11 comprising the step of selecting the height of the ceramic ring to be at least 10 μm.

15. The method of claim 11 comprising the steps of selecting the height of the titanium ring to be at least 30 µm; and selecting the height of the titanium alloy, Ti-6Al-4V, ring to be at least 30 µm.